

UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF NORTH CAROLINA  
WESTERN DIVISION  
Civil Case No.: 5:18-cv-325

STEPHEN JEFFREY PRICE,	)	
	)	
Plaintiff,	)	
	)	
v.	)	DEMAND FOR JURY TRIAL
	)	
FLOGIC, INC.,	)	
	)	
Defendant.	)	
_____	)	

**COMPLAINT**

Plaintiff Stephen Jeffrey Price, for his complaint against FloLogic, Inc. (“FloLogic”) alleges as follows:

**THE PARTIES**

1. Plaintiff resides in Casper, Wyoming.
2. Upon information and belief, Defendant FloLogic is a North Carolina corporation organized under the laws of the State of North Carolina, with its principal place of business at 1015 Aviation Parkway, Raleigh, North Carolina 27560.

**NATURE OF THE ACTION**

3. This is an action for patent infringement of U.S. Patent No. 5,971,011 (“the ’011 Patent”) in violation of the United States patent laws, 35 U.S.C. § 100, *et seq.*

**JURISDICTION AND VENUE**

4. This Court has subject matter jurisdiction over the patent claim pursuant to 28 U.S.C. §§ 1331 and 1338(a).

5. This Court has personal jurisdiction over FloLogic at least because FloLogic has committed acts of patent infringement within the State of North Carolina and this Judicial District in violation of 35 U.S.C. § 271, FloLogic transacts business within the State of North Carolina and this Judicial District, and FloLogic solicits customers in the State of North Carolina and this Judicial District. In short, FloLogic has purposely availed itself of the privileges and benefits of the laws of the State of North Carolina, and FloLogic derives benefits from its presence in this Judicial District. Upon information and belief, FloLogic also derives revenue from infringing products offered for sale, sold and used within this Judicial District, and should reasonably expect its actions to have consequences within this Judicial District.

6. Moreover, FloLogic is subject to specific personal jurisdiction in this case because at least part of Plaintiff's claims arise from FloLogic's activities in the State of North Carolina and this Judicial District.

7. Venue is proper in this Judicial District pursuant to 28 U.S.C. §§ 1391(b), 1391 (c) and 1400(b).

### **FACTUAL BACKGROUND**

8. Plaintiff is the owner of all right, title, and interest in the '011 Patent entitled "Water Shut-Off and Leak Detection System."

9. The application leading to the '011 Patent was filed on February 21, 1998.

10. The '011 Patent was duly and properly issued by the United States Patent and Trademark Office on October 26 1999. The patent expired on February 21, 2018. A true and correct copy of the '011 Patent is attached hereto as Exhibit A.

11. FloLogic currently offers for sale the System 3.5 ("Accused Device").

12. The System 3.5 is a water shut-off and leak detection system.

13. The Accused Device is intended to be installed at or near the water intake pipe of a building or residence. The Accused Device monitors the flow of water, and is capable of shutting off the water to the building or residence if a leak is detected.

14. On April 23, 2002, the United States Patent and Trademark Office issued U.S. Patent No. 6,374,864 (“the ‘846 Patent”). The ‘846 Patent is assigned to FloLogic. On information and belief, the inventions claimed in the ‘846 Patent are included in the Accused Device. During prosecution of the patent application that led to the ‘846 Patent, the Examiner cited the ‘011 Patent as prior art against that application.

**FIRST CAUSE OF ACTION**  
**(INFRINGEMENT OF THE ‘011 PATENT)**

15. Plaintiff restates and realleges the allegations set forth in paragraphs 1 through 14 above and incorporates them by reference.

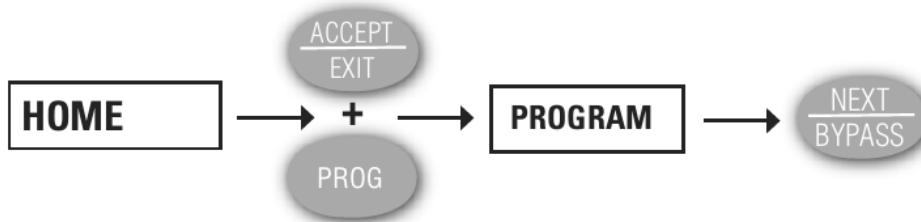
16. Upon information and belief, FloLogic has infringed and continues to infringe, either literally or under the doctrine of equivalents, at least Claim 1 of the ‘011 Patent in violation of 35 U.S.C. § 271(a) by making, using, offering for sale or selling within the United States the Accused Device and/or by importing into the United States the Accused Device.

17. Upon information and belief, FloLogic has also infringed and continues to infringe at least Claim 1 of the ‘011 Patent in violation of 35 U.S.C. § 271(b) by inducing vendors, customers and/or others to make, use, sell, and/or offer for sale within the United States, products or processes that practice inventions of the ‘011 Patent with knowledge of and intent that such vendors, customers and/or others infringe the ‘011 Patent. FloLogic has intentionally caused, urged, encouraged, or aided in the action that induced infringement, including direct infringement, of the ‘011 Patent by vendors, customers, and/or others. Upon information and belief, such intentional action includes, for example, inducing customers to infringe the ‘011

Patent by advertising features of the infringing products that meet the elements of Claim 1. As a result of its conduct, FloLogic has induced and is inducing such vendors, customers and/or others to make or use systems such as the Accused Device, to infringe at least Claim 1 of the '011 Patent. Additionally and in the alternative, FloLogic has induced and is inducing vendors, customers and/or others to implement and utilize parts of or all of the systems and methods of the Accused Devices to infringe at least Claim 1 of the '011 Patent. FloLogic has engaged and is engaging in this conduct while aware of the '011 Patent and with the intent to infringe, at least as of the filing of the Complaint.

18. Claim 1 recites: “[a] water shut-off and leak detection system for use with a conduit . . . .” FloLogic’s User Manual for the Accused Device touts the device as “[t]he circuit breaker for every plumbing system.” The cover of the User Manual states “INTELLIGENT LEAK DETECTION AND WATER CONSERVATION<sup>TM</sup>.” According to the User Manual, “[w]hen flow is detected that exceeds the preset timer intervals, the water is turned off, an audible alarm is sounded and the Control Panel displays the message ‘LEAK.’”

19. Claim 1 further recites: “a microprocessor including a program memory and an alterable data memory . . . .” Based on present information, the Accused Device includes a microprocessor including program memory and an alterable data memory. For example, the User Manual for the Accused Device includes the following diagram indicating the existence of a microprocessor including a program memory and an alterable data memory:



The programming menu can be accessed when the display reads "HOME". To enter the Program mode, **simultaneously** press the ACCEPT / EXIT key and the PROG key on the Control Panel. The display will read "PROGRAM". Pressing the NEXT / BYPASS key will scroll through the programming menu as follows:

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20. Claim 1 further recites: "an elapsed time clock coupled to said microprocessor, said elapsed time clock adapted to be reset by said microprocessor . . . ." The User Manual for the Accused Device includes the following statements indicating that the Accused Device includes an elapsed time clock coupled to said microprocessor, said elapsed time clock adapted to be reset by said microprocessor:

Upon System start-up the LCD panel will read "HOME" indicating that the Home timer is in effect. Unless previously changed by the user, the timer interval for the Home mode is 30 minutes. When the display reads "HOME", this is the length of time that water will be allowed to run uninterrupted before the System sounds an alarm and turns off the water.

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When you wish to change to Away mode, press the AWAY key. Unless previously changed by the user, the timer interval for the Away mode is 30 seconds. When you switch from Home mode to Away mode, the display will read "AWAY" and the Valve will enter an exercise cycle that results in the Valve closing and the reopening. During this time you may hear the motor turning the valve. To exit the Away mode, simply press the HOME key to return to the Home mode.

21. Claim 1 further recites: "a primary setting consisting of a predetermined quantity of water and a predetermined period of elapsed time, said primary setting supplied to said microprocessor . . . ." The Accused Device includes a primary setting consisting of a predetermined quantity of water and a predetermined period of elapsed time, said primary setting supplied to said microprocessor. For example, FloLogic's website (<http://www.flologic.com/FAQ.html>) states the following:

Once these patterns were understood, we decided our best direction would be to monitor minutes of uninterrupted water flowing into the premises beginning at the lowest flow rate we could detect, 0.5 oz/minute (1 tablespoon) because even a small leak, over time, can cause as much damage as a larger leak. So, once the water begins flowing into your home, and a flow rate is established, we initiate a timer inside the software that times minutes of uninterrupted water flowing into your home. The default parameters embedded in the software state in the Home mode if the water runs uninterrupted for a period of thirty-minutes, for whatever reason, the water gets shut off. In the Away mode, if the water runs uninterrupted for a period of thirty-seconds, the water gets shut off. Every time the water is shut off, the timer resets. Simple!

Also, the User Manual for the Accused Device includes the following statements:

**Flow Sensor ("Sensor")**

The Flow Sensor is directly connected to the blue electrical receptacle located on the Valve assembly . The Flow Sensor is responsible for the detection of water running through the System. While the Sensor is able to detect flow as low as 0.5 ounce per minute, the software controlling the Sensor is pre-set at the factory to recognize 2.0 ounces of flow per minute as the point when the flow timer is initiated. Depending on your specific needs, you can adjust the sensitivity of the Sensor (see Programming Instructions on page 18).

**DRIP RATE** This feature allows the user to change flow detection sensitivity to accommodate intermittent low-use water demand from appliances such as humidifiers as well as known "nuisance leaks" such as leaky toilet valves and dripping faucets. The System ships with a pre-set Drip Rate of 2.0 ounces per minute and can be set anywhere from 0.5 to 32 ounces per minute. Based on the characteristics of your plumbing system, you can modify the Drip Rate setting to a higher or lower sensitivity threshold. The System does not start the Home or Away timers until the Drip Rate is exceeded and any flow timers are reset when the flow of water drops below the Drip Rate setting.

**The table found on the inside back cover gives you a perspective of how much each Drip Rate value equates to in water usage over time.**

As a second option, you can manually raise or lower the Drip Rate threshold by pressing the UP or DN keys on the keypad. To accept this change, press the ACCEPT / EXIT key. This will store the new Drip Rate value in the program, exit you from the programming menu and return the System to Home mode.

PROGRAMMABLE FEATURE	DEFAULT SETTING	ENTER YOUR SETTINGS HERE
Drip Rate threshold	2.0 oz. per minute	
Home interval timer	30 minutes	
Away interval timer	0.5 minutes (30 seconds)	
Delay Away interval timer	0 minutes (OFF)	
Bypass interval timer	120 minutes	
Auto Away interval timer	18 hours	

22. Claim 1 further recites: “a valve adapted to be disposed intermediate said conduit, said valve including a first position adapted to permit the flow of water therein to occur and a second position adapted to prevent the flow of water therein, and including means for electrically connecting said microprocessor to said valve, said means for electrically connecting including means for urging said valve from said first position to said second position in response to a control signal from said microprocessor . . . .” The Accused Device includes a valve adapted to be disposed intermediate said conduit, said valve including a first position adapted to permit the flow of water therein to occur and a second position adapted to prevent the flow of water therein, and including means for electrically connecting said microprocessor to said valve. Based on present information, said means for electrically connecting includes means for urging said valve from said first position to said second position in response to a control signal from said microprocessor, either literally or under the doctrine of equivalents. For example, the FloLogic Homeowner Flyer for the Accused Device includes the following statements:

**Flexible.**

The FloLogic System combines a precision calibrated low-flow sensor with an intuitive user interface to continuously monitor water use and control a motor-driven ball valve. Certified to IP68 for dust and water ingress protection, the valve and flow sensor assembly can be installed in any orientation in both indoor and outdoor environments. The System can also be connected to any security or automation system, alerting a monitoring service when a leak is detected.

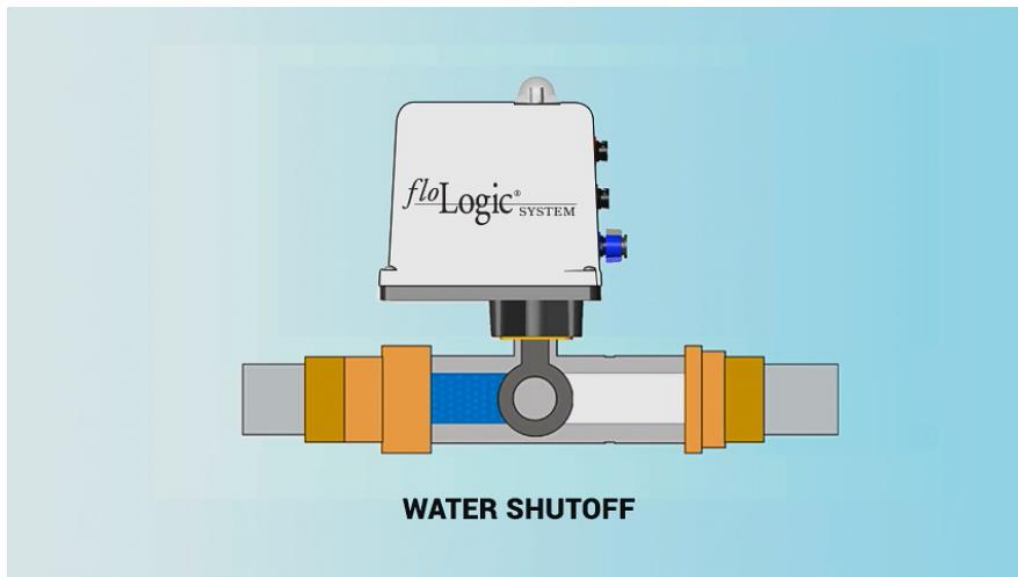
**Reliable.**

The FloLogic System continuously monitors all water entering the property and detects any unusual flow, 24 hours a day, seven days a week. An integrated battery provides stand-by power allowing the System to continue to perform these functions even when AC power is lost. If water use exceeds the preset limit, FloLogic automatically closes the valve and sounds an alarm at the Control Panel. The FloLogic System does all of this from a single point in the water main, serving as a first line of defense against water damage.

Also, the User Manual for the Accused Device includes the following statements and figures:

**Keypad and Display (“Control Panel”)**

The Control Panel is comprised of a keypad with eight keys and a backlit liquid crystal display (LCD). The Control Panel is the sole user interface for the FloLogic System. All status messages and programming functions are presented at the Control Panel. The Control Panel is connected to the Valve with the supplied 50-foot cable. Longer cables (up to 500 feet) are available in the event that the Control Panel needs to be located further than 50 feet from the Valve.



**When FloLogic detects a leak, incoming water flow is automatically turned off.**

23. Claim 1 further recites: “a flowmeter operably attached to said valve, said flowmeter adapted to provide a continuous indication of the rate of fluid flow to said microprocessor; wherein said control signal is generated by said microprocessor in response to a continuous flow of water exceeding said predetermined quantity of water within said predetermined period of time . . . .” The Accused Device includes a flowmeter operably attached to said valve and adapted to provide a continuous indication of the rate of fluid flow to said microprocessor. Also, the control signal is generated by said microprocessor in response to a continuous flow of water exceeding said predetermined quantity of water within said





predetermined period of time. For example, the User Manual for the Accused Device includes the following statements:

#### **Flow Sensor (“Sensor”)**

The Flow Sensor is directly connected to the blue electrical receptacle located on the Valve assembly . The Flow Sensor is responsible for the detection of water running through the System. While the Sensor is able to detect flow as low as 0.5 ounce per minute, the software controlling the Sensor is pre-set at the factory to recognize 2.0 ounces of flow per minute as the point when the flow timer is initiated. Depending on your specific needs, you can adjust the sensitivity of the Sensor (see Programming Instructions on page 18).

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<p><b>HOME</b></p>  <p><b>Places System in Home Mode</b></p>	<p>The Home mode is normally used when the structure is occupied. The Home mode is pre-set to allow 30 minutes of uninterrupted water flow before shutting off the water. If desired, this time can be changed to a value as low as 1 minute or as high as 99 minutes (see Programming Instructions on page 18). When in any state other than Home (Away, Bypass, Water Off), the Home mode may be activated by a single press of the HOME key on the keypad. When the System is in the Home mode, the LCD will read “HOME”.</p>
<p><b>HOME</b></p>	
<p><b>AWAY</b></p>  <p><b>Places System in Away Mode</b></p>	<p>The Away mode is typically used when the structure is unoccupied. The Away mode is pre-set to allow 0.5 minutes (30 seconds) of uninterrupted water flow before shutting off the water. If desired, this time can be changed to a value as low as 0.0 minutes or as high as 99 minutes (see Programming Instructions on page 18). When in any state other than Away, the Away mode may be activated by a single press of the AWAY key on the keypad. When the Away mode is activated, the Valve will complete an exercise cycle, confirming operational readiness. When the System is in the Away mode, the LCD will read “AWAY”.</p>
<p><b>AWAY</b></p>	

24. Claim 1 further recites: “wherein said elapsed time clock is reset to zero to begin accumulating anew subsequent to accumulating a duration of time equal to said predetermined period of time during a continuous flow of water that has not exceeded said predetermined quantity of water within said predetermined period of time and correspondingly, said quantity of fluid flow is reset to zero to begin accumulating anew when said elapsed time clock is reset to zero.” The elapsed time clock of the Accused Device is reset to zero to begin accumulating anew subsequent to accumulating a duration of time equal to said predetermined period of time during a continuous flow of water that has not exceeded said predetermined quantity of water within said predetermined period of time and correspondingly, said quantity of fluid flow is reset

to zero to begin accumulating anew when said elapsed time clock is reset to zero. For example, the User Manual for the Accused Device includes the following statements:

**DRIP RATE** This feature allows the user to change flow detection sensitivity to accommodate intermittent low-use water demand from appliances such as humidifiers as well as known "nuisance leaks" such as leaky toilet valves and dripping faucets. The System ships with a pre-set Drip Rate of 2.0 ounces per minute and can be set anywhere from 0.5 to 32 ounces per minute. Based on the characteristics of your plumbing system, you can modify the Drip Rate setting to a higher or lower sensitivity threshold. The System does not start the Home or Away timers until the Drip Rate is exceeded and any flow timers are reset when the flow of water drops below the Drip Rate setting.

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25. Plaintiff has been damaged by FloLogic's infringement of the '011 Patent.
26. Upon information and belief, the infringement of one or more claims of the '011 Patent by FloLogic was willful and deliberate. As a result, Plaintiff is entitled to increased damages under 35 U.S.C. § 284 and to attorney fees and costs incurred in prosecuting this action under 35 U.S.C. § 285.

### **PRAYER FOR RELIEF**

**WHEREFORE**, Plaintiff prays for judgment:

- A. that FloLogic has infringed the '011 Patent;
- B. awarding Plaintiff compensatory damages for FloLogic direct and indirect infringement of the patent-in-suit, in an amount to be ascertained at trial, including at least a reasonable royalty and/or Plaintiff's lost profits, together with interest and costs pursuant to 35 U.S.C. § 284;
- C. trebling the amount of compensatory damages for patent infringement pursuant to 35 U.S.C. § 284;
- D. awarding Plaintiff reasonable attorneys' fees pursuant to 35 U.S.C. § 285;
- E. granting Plaintiff such other and further relief in law or in equity as this Court deems just or proper.

**DEMAND FOR JURY TRIAL**

Plaintiff demands a trial by jury on all issues so triable.

DATED: June 29, 2018

Respectfully submitted,

/s/ John F. Ward

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